

Ferns of the Transvaal

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There appeared in the October number of the South African Journal of Science a paper entitled "The families, genera, and species of *Pteridophyta* of the Transvaal," by Joseph Burtt-Davy and Vicary Gibbs Crawley, both in government service there. The senior author, Mr. Burtt-Davy, is a professional botanist who went to South Africa to take the position of government botanist. At the time of his appointment to that position, he held a position in the United States Department of Agriculture. He was originally from England but came to America as a young man, and before he returned to British soil had become an American citizen and had taken an American wife.

Mr. Crawley was an employee of the Transvaal Audit and Exchequer Department, and thus not a professional botanist, but Mr. Burtt-Davy pays high tribute to his interest and ability in botanical study. He died on board steamer in September, 1909, while bound for home to be married.

The article occupies twenty-eight pages, and includes one hundred and nine species, of which twenty-eight are ferns, i. e., plants of the orders Ophioglossales, Marattiales, Filicales and Marsileales; there is one *Equisetum*, *E. ramosissimum* Desf., and ten lycopods, six in *Lycopodium* and four in *Selaginella*.

To quote from the text: "In preparing the keys for this paper, use has been made of the descriptions and illustrations in Mr. T. R. Sim's 'The ferns of South Africa.'"

"I am also indebted to Mr. Sim for the identification of my collection of *Pteridophyta*, which he worked out when preparing his paper 'Recent information concerning South African ferns and their distribution,' published

in the Transactions of the South African Philosophical Society **16**: 267-300. 1906."

The Transvaal is an inland province on the east side of South Africa, about two hundred miles in extent each way. At the north it overlaps the Tropic of Capricorn upwards of fifty miles, so that a tropical or semitropical climate would be expected, and for the most part the names of the ferns are in accord with this assumption.

It is not, therefore, very surprising to meet the names of species known to occur almost everywhere in the tropics. Such are *Ophioglossum reticulatum* L., *Aspidium molle* Desv. [Sw.], *Adiantum caudatum* L., *A. capillus-veneris* L., *Pteris longifolia* L., *P. cretica* L., and *Osunda regalis* L.

But when we find that the list includes species otherwise north temperate, or strictly American, the explanation of so anomalous a distribution appears impossible. In this class are *Ophioglossum vulgatum* L., *Nephrodium thelypteris* Desv. [Strempel], *N. filix-mas* Rich., *Asplenium adiantum-nigrum* L., *Polypodium vulgare* L., *P. incanum* Sw. [= *P. polypodioides* (L.) Hitch.], *Lycopodium clavatum* L., *L. carolinianum* L., and *Selaginella rupestris* Spring.

It may be possible to explain the riddle as partly due to incorrect identification, but not for all. Concerning a few species, there is no question as to the identity.

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A fern collector in Florida

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It was my pleasure to spend the time from February 15th to April 15th, 1910, in southern Florida. About half of this time I put in on the west coast, in the Manatee country, and the balance at Miami and Palm Beach, on the east side of the state. From the latter